



## **General Certificate of Secondary Education**

# **Design and Technology: Systems and Control Technology 45651**

## **Unit 1: Written Paper**

# **Report on the Examination**

*2011 examination – June series*

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## **Administration**

It is pleasing to note that the majority of centres complied with AQA's instructions relating to the collation, packaging and dispatching of scripts.

A number of candidates contravened the regulations with regard to the use of the colour of ink employed to record their answer. Black ink or black ball-point pen should be used for written answers and pencils and coloured pencils should be used for drawings. Candidates should also be reminded to write their responses within the space allocated on the paper.

## **General**

There was evidence of the use of the preliminary material by centres when preparing their candidates for the examination. The use of the preliminary material is intended to give the candidates 'ownership' of their paper. It allows them to produce real and valid responses based on work done in the weeks before the examination. Where centres had made good use of the preliminary material, their candidates invariably went on to produce good quality designs.

Teachers should emphasise good examination techniques to their candidates, in particular; the need to read and re read each question carefully before attempting it. They should also be taught to use any 'spare' time at the end of the examination to carefully go through both the questions and their answers.

## **Question 1**

The beginning section of this question was well answered. Many candidates gained full marks by producing three relevant specification points for the interior light of a car. They invariably went on to expand their answers to provide suitable explanations.

There was a variety of responses seen to the logic gate question, with few candidates scoring full marks. Similarly, few candidates scored the maximum marks for their system block diagram response.

## **Question 2**

The majority of candidates identified the common electronic components with few naming all correctly. It seemed that the student knowledge of Analogue or Digital was varied, ranging from almost nil to comprehensive. Most candidates however gave correct examples of the relevant clock displays.

## **Question 3**

Again, a range of responses were seen with marks being lost by candidates towards the end of the question as the difficulty increased.

Teachers should emphasis the need for the need to use the correct terms and names for the systems as given in the specification and also for the requirement for neat, simple sketches. A drive system that connects the shafts has to be drawn attached to the shafts.

The question sections on friction again showed a full range of responses, from blank, through weak to a comprehensive understanding.

#### **Question 4**

Many candidates named and described a suitable plastic, however many had failed to realise that this question was about a washing machine control system model as stated in the question header.

There was a range of responses to the locking mechanism and again, teachers should remind their students for the need for clear sketches in response to questions.

The flowchart was well answered with the majority of candidates correctly stating the states of the decision boxes, most correctly entering the statements but few correctly drawing all three connecting lines.

#### **Question 5**

This question was very well answered. The majority of candidates gained full marks by answering questions on the Health & Safety issues and Product maintenance for a lift product.

#### **Question 6**

There was the full range of responses to this question. The majority of candidates suggested a recognisable system that would detect a person in the doorway and could explain how this would improve safety. Far fewer candidates gained full marks by explaining how the system would work by referring to the specific components that they would use.

A number of candidates wrote more than would fit on the lines provided. This rarely gained them extra marks and should be discouraged. A full mark response can easily be written in the allocated space.

This question also examined the candidates Quality of Written Communication. This was generally good to very good. Teachers and candidates are reminded of the need for good English, particularly in the questions with extended written responses.